

CHAPTER 6

MEAT, POULTRY, AND SEAFOOD

Meat, poultry, and seafood offer excellent nutritional benefits. Importantly, a large share of basic daily food allowance (BDFA), or the monetary value required to provide a nutritionally adequate diet for one person for 1 day, is spent on meat, poultry, and seafood.

This chapter explains the following topics:

- Types of meat procured by the military
- Grades of beef, pork, veal, lamb, poultry, and seafood used by the military
- Styles of poultry used by the military
- Meat thawing methods
- Meat cooking methods
- Poultry cooking methods
- Seafood cooking methods

MEAT

Meat is the flesh of any animal used for food. The word *meat* as used in the Navy foodservice means beef, veal, pork, lamb, or rabbit. Meat appears on the Navy menu in some form each day. It is the focal point of every meal, dictating what other dishes will be served. Correctly cooked and served meat is the sign of a well-informed and skillful MS.

FORMS OF MEAT

The forms of meat procured by the military are frozen, fabricated, and canned.

Fabricated meats have been either partially or completely boned, trimmed, and portion-cut into slices, steaks, chops, or roasts. Most types of meat procured by Navy messes are fabricated to some extent.

A completely fabricated meat has all bones removed and is cut into portion-sized steaks or roasts. For example, boneless beef is cut from selected wholesale beef cuts or carcass meat according to specifications of the armed forces. The meat is wrapped, packed in shipping containers, and then frozen. Bones, excess fat, gristle, and tendons are removed by the processor.

BEEF

Beef comes from cattle and is the most frequently used of all meats. There are five categories of beef.

- Steer: male that is castrated when young
- Cow: female that has calved
- Bull: fully developed male
- Heifer: young female that has not born a calf
- Stag: male castrated after maturity

Steers and heifers are most suitable for use in Navy messes; whereas cows, bulls, and stags are older and stringier and may be found in canned products.

A beef chart (fig. 6-1) shows the location and uses of various cuts of beef procured by the military for use in the general mess (GM).

Beef Inspection

All beef and beef products prepared in establishments operating under Federal Meat Inspection Regulations are branded or labeled as follows: "U.S. inspected and passed by Department of Agriculture"; "U.S. inspected and passed"; U.S. INSP'D & P'SD"; together with the number that identifies the establishment. These stamps (fig. 6-2) indicate that the beef and beef products bearing these stamps comply with the inspection regulations of the United States Department of Agriculture (USDA), and that they are wholesome and have been processed under sanitary conditions.

Beef delivered under contract to the military within the continental United States is not accepted unless each item (or the shipping case) bears the inspection stamp or USDA label. Each item must also bear a Department of Defense stamp that indicates that the item meets all terms of the contract (fig. 6-3).

After it is determined that the animals are free of disease and meet sanitary requirements, the USDA stamps are placed on the meat carcass.

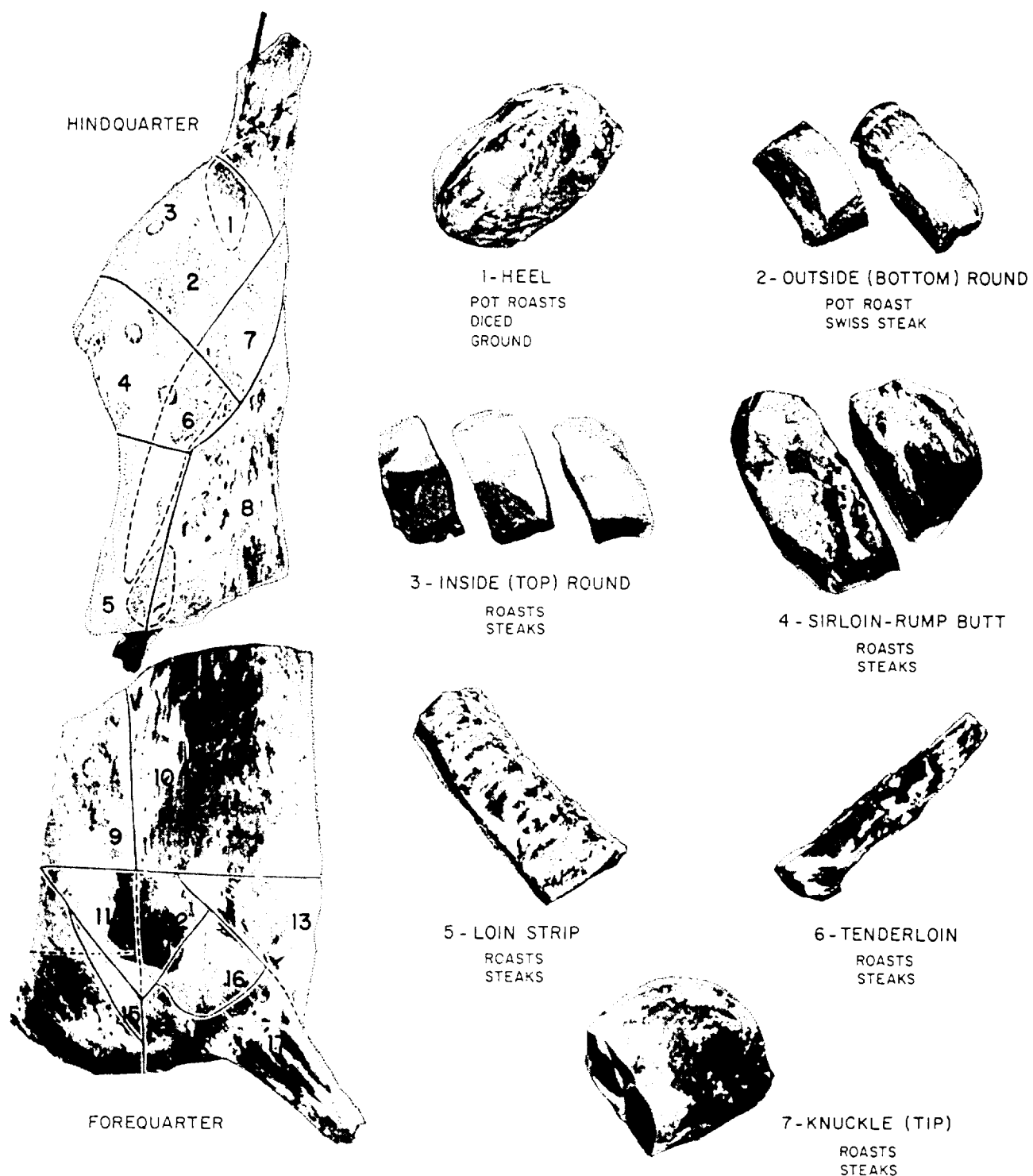


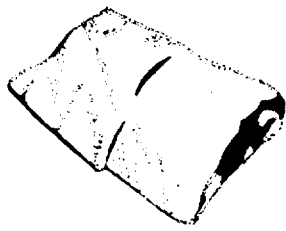
Figure 6-1.—Cuts in a side of beef.

Grades of Beef

Beef is graded as prime, choice, good, standard, commercial, utility, and cutter. The military services generally purchase only choice and good grades.

However, utility grade or better ground beef and beef tenderloins are procured ungraded.

Beef roasts and steaks procured for the Navy are choice grade. Choice grade meats are tender, juicy, and flavorful. Some beef items such as



9 - BONELESS RIB
ROASTS
STEAKS



10 - BONELESS PLATE
BRAISE
STEW
GROUND



13 - BONELESS BRISKET
BRAISE
STEW
GROUND



11 - INSIDE CHUCK
POT ROASTS
SWISS STEAKS



12 - UPPER HALF - CLOD
POT ROASTS



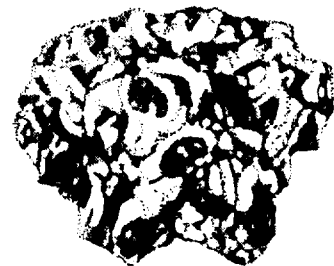
16 - LOWER HALF - CLOD
POT ROASTS



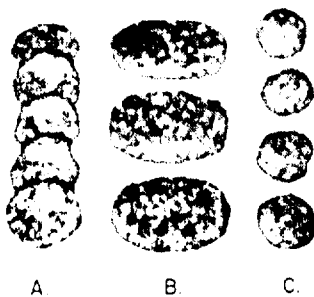
15 - CHUCK TENDER
POT ROASTS



14 - BONELESS NECK
BRAISE
STEW
GROUND



8, 10, 13, 14, 17 -
BONELESS STEW



A. BEEFBURGERS
B. SALISBURY STEAKS
C. MEATBALLS

Figure 6-1.—Cuts in a side of beef—Continued.

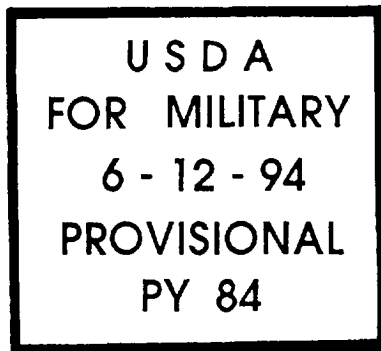
diced beef may be from choice or good grade meat. Good grade beef is not quite as tender, juicy, or flavorful as choice grade, but if the proper preparation methods are used, an acceptable product is produced.

Good grade beef has less fat marbling than choice or prime grade beef.

Frozen boneless beef products that are procured include the following:



Figure 6-2.—Department of Agriculture Inspection stamps.



THIS STAMP IS USED BY RESIDENT POULTRY, SHELL EGG, AND EGG PRODUCTS GRADERS.

THE LETTERS "PY" IDENTIFY THE DIVISION AS POULTRY. THE NUMBER FOLLOWING IDENTIFIES THE GRADER PERFORMING THE INSPECTION.

Figure 6-3.—Inspection stamps of Department of Agriculture and Department of Defense.

- Grill steak..... Average weight: 7 ounces.
Rib-eye, loin strip, sirloin butt.
- Sandwich steak..... Wafer-thin slices of lean beef, 2 ounces.
- Swiss steak, braising..... Average weight: 6 ounces.
- Oven roast..... Approximately 10 pounds.
Knuckle, top round.

- Oven roast, precooked..... Top round. Product is ready to be sliced and served. May be heated on grill or served with hot au jus.
- Pot roast..... Maximum weight: 10 pounds.
Shoulder clod or chuck roll.
- Beef pattie mix, bulk..... Packaged in rectangular or chub with 20 percent soy pack units. Approximately 7-pound package.
- Beef patties with 20 percent soy..... Weight, approximately 3 ounces.
- Beef for stewing, diced..... Prepared from selected bone-in or boneless whole beef cuts.
- Rib-eye roll..... Weight, 8 to 10 pounds.
- Rounds..... Prepared from bone-in rounds.
Weight 35 to 57 pounds.
- Tenderloin..... Minimum weight: 4 pounds.
Ready to roast or slice into steaks.

Each box of boneless beef is clearly marked to show the type of meat inside.

Bone-in beef (beef rounds and ribs) should be used only as storage space permits. It requires more storage space than boneless beef. The beef rounds have the rump and shank removed. The weight range for rounds is 40 to 64 pounds. The oven-ready weight range of beef ribs is 14 to 22 pounds.

PORK

Pork comes from hogs. Pork is USDA inspected and graded, but grade marks are not indicated on the meat for consumer use. The difference in the tenderness, juiciness, and flavor of the different grades of pork is not as great as it is in the different grades of beef. The flesh of hogs is the lightest in color of all meats. Young pork is white to grayish pink; pork from older animals is darker pink. The flesh should be firm

and fine grained and should have a good intermingling of fat and lean.

The Navy procures both fresh and cured pork. The fresh cuts, which may be delivered frozen, are pork butts (Boston), boneless pork hams, bladeless pork loins, boneless pork loins, pork hocks, pork sausage, diced pork, pork spareribs, country-style ribs, and pork tenderloins. Cured products include Canadian-style bacon, raw and precooked bacon, boneless cooked smoked ham, smoked pork hocks, and canned ham (pear-shaped, pullman-shaped, and chunks).

As with beef, pork should be handled, cut, prepared, and packaged according to contract specifications. The curing processes are applied to the basic pork products such as ham, shoulder (picnics), and bacon.

The bladeless loin is that portion of the loin that remains after the blade bone and related cartilages and the overlying flesh have been removed. The boned pork loin is the regular cut loin that has been trimmed and boned, cut in half, and the two halves placed together and tied to form a symmetrical roast. If desired, pork chops may be cut from the boneless pork loin.

Boneless slices consist of 5 ounces of boneless loin. Pork tenderloin is a muscle that has been removed from the loin section of pork sides. Spareribs are the bony but flavorful rib section. Country-style ribs are prepared from the backbone. Frozen pork sausage is available in links, bulk and pattie styles. All pork sausage products are very perishable and have a short shelf life of 2 to 3 months. Fresh pork hocks and pigs' feet are available for use. Pigs' feet may be served with cooked greens or as an entrée. Fresh pork hocks are uncured and generally served with sauerkraut.

Bacon is served more frequently than any other pork product. Frozen raw or canned and frozen precooked items are available. Precooked frozen and canned bacon require only heating to a serving temperature. They save space and reduce waste. Although initially more expensive, each pound of precooked bacon is equivalent to 2 1/2 pounds of raw bacon.

Smoked pork hocks may be cooked and served as a main course or used to season cooked greens.

Hams procured by the Navy may be fresh, frozen, canned, smoked boneless, or whole hams. All hams are skinned. Fresh pork hams are frozen and also boneless. They range in weight from 8 to 14 pounds. Canned hams are pasteurized and may be used without further heating, but heating and glazing improve the flavor.

They should be stored and kept under refrigeration at all times.

Canned hams have a high yield, are easy to prepare, and are economical if they are sliced properly. Improperly sliced ham will not only produce uneven portions that are unattractive but will produce more waste and will increase the overall cost. The following slicing technique is recommended to obtain the maximum number of usable slices from either whole or tamed ham after it is baked or as it comes from the can.

1. Divide the whole ham into three sections. Cut the upper third section straight across the butt end and cut the remaining portion into two even pieces lengthwise.
2. Cut the slices lengthwise with the grain, across the butt section. Cut the other sections across the grain as shown in figure 6-4.

VEAL

Veal/calf is immature beef or calves less than 1 year old. Good veal/calf has a light grayish pink color and has a firm, smooth appearance. The types of veal/calf procured are boneless roasts (5 1/2 to 7 pounds), ground veal, and breaded veal steaks. Breaded veal steaks, 5 to 6 ounces, are produced from veal using a flake-cut method. The product is ready to cook. Deepfat fry, add cheese and tomato sauce, and heat until hot in ovens. Veal steaks should be cooked frozen to ensure a moist, tender product.

LAMB

Official USDA grades for lamb are prime, choice, good, utility, and cull. These grades are based on conformation (shape of the cut) and quality. The military services procure only prime and choice.

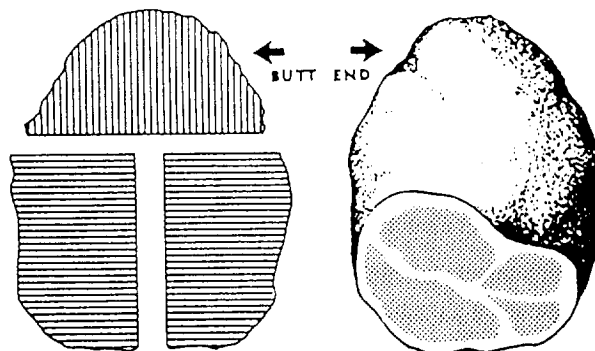


Figure 6-4.—Slicing boneless ham.

High-quality lamb has a smooth covering of clear, white, brittle fat over most of the exterior. The lean portion is pinkish red in color, fine in texture, and velvety in appearance. GMs use only boneless leg roast.

RABBIT

Like other lean meats such as poultry and fish, rabbit is also a good source of high-quality protein. The military procures ready-to-cook, cutup frozen rabbit. The usual method of preparation is frying.

OTHER MEAT ITEMS

Other meat items that are used in the GM are as follows:

- Beef liver is available in portion-cut 4-ounce slices.

- Corned beef is a frozen product commercially prepared by pickling boneless brisket, rump, or other selected beef cuts in a salt solution (brine). Also, it may be used for such entrées as corned beef and cabbage or for sandwiches.

- Dried beef is a frozen product commercially prepared from beef rounds cured with sugar and salt, dried, and sliced paper thin. It is normally used for creamed chipped beef on toast.

- Sausage is finely or coarsely chopped meat (pork, beef, or combination of beef and pork), seasoned with spices and herbs, that is stuffed into edible casings. Depending on the type of sausage, it may be cooked or uncooked. Check the label for cooking instructions. Types of sausages available include the following:

Pork sausage is uncooked and available in 1- to 6-pound rolls and in 3-ounce patties.

Breakfast sausage (beef and pork) is a precooked, link-style sausage; no preparation is needed except heating.

Breakfast sausage, all beef, is an uncooked, link-style sausage.

Specialty sausages can be served as a sandwich or an entrée. The following varieties are available:

Bockwurst and bratwurst are prepared from pork or beef or a combination. They are seasoned with spices and herbs and require cooking.

Knockwurst is a highly seasoned sausage prepared from beef. It requires cooking.

Italian sausage is available either mild (sweet) or hot. It is prepared from pork and requires cooking.

Pepperoni is a precooked, highly seasoned beef sausage. It is available whole or diced.

Polish sausage is a highly seasoned, thick, long smoked pork, or pork and beef sausage that is cooked. It is also known as kielbasa. It requires heating.

- Other types of specialty meats include the following:

Pastrami is precooked. It is commercially produced by curing and smoking beef with spices. Pastrami is usually served as hot slices in sandwiches.

Chitterlings are small pork intestines. They are available frozen or canned (raw or precooked).

Pigs' feet are the front feet of a pig. The product is raw and requires cooking.

Cold cuts, including pressed ham, pickle and pimento loaf, turkey roll, bologna, salami, luncheon meat, thuringer, and liver sausage, once thawed, are sliced and served for sandwiches or cold-cut platters. Bologna, salami, and luncheon meat may be grilled and served as breakfast meats.

Frankfurters, popularly called hot dogs or wieners, are similar to sausage products, but are always precooked. Only heating is required before serving. After heating, they may be served in a sandwich roll (hot dog) or as an entrée; for example, frankfurters and baked beans. There are two sizes: regular (10 links per pound) and one-fourth pound.

Scrapple is available frozen. It is made from cornmeal, pork scraps, and seasonings. To prepare, thaw, slice and fry. Check the label directions. Scrapple is usually served at breakfast.

GENERAL PREPARATION AND COOKING METHODS

Most of the meat procured for use in Navy messes is frozen. Handling procedures, before and after cooking, are extremely important in regard to sanitation as well as to economy and palatability. Meat is a potentially hazardous food. Frozen meat, improperly thawed, can become contaminated with bacteria. Uncovered meat surfaces are a perfect area for bacterial growth; therefore, long exposure of the moist surface to air should be avoided. Improper thawing also causes an

unnecessary loss of nutrients and meat juices, resulting in a decreased quality of meat.

THAWING METHODS

Frozen meat may be thawed in several ways. The preferred method is slow thawing because there is less drip loss in the meat. Meat thawed slowly yields a juicier and more palatable cooked product. On small ships with limited chill space, or whenever time is limited between meat issue and mealtime, slow thawing is not practical. The Bureau of Medicine and Surgery (BUMED) has approved the use of alternate methods that are recommended for such circumstances.

Once meat has been defrosted or thawed, it should be used as soon as possible and not refrozen. Breakouts should not exceed the amount to be served.

Preferred Thawing Method

Break out the quantity of meat required. Remove it from the shipping container, but leave the meat inside the wrappings. Thaw slowly at temperatures between 36°F and 38°F until almost completely thawed. The thawing period will vary according to the following conditions:

- Size of the meat cut (the larger the size, the longer the time required).
- Bone-in or boneless state. Bone-in meat takes less time to thaw.
- Air temperature and circulation in chill space. Moving air accelerates thawing.
- Quantity of meat being thawed in a given area. A large amount will lower the temperature of the room and decrease the thawing action. Spread the cuts out. Do not stack them. It is almost impossible to predict the exact time required to thaw meat unless there is a perfectly controlled set of circumstances. Frozen wholesale beef cuts and frozen boneless beef may require up to 48 hours to thaw at temperatures of 36°F to 38°F. Cuts from pork, veal, and lamb will probably thaw in about 24 hours under refrigerator temperatures.

Alternate Thawing Methods

If it should become necessary to thaw the frozen meat quickly, one of two methods is used. When it is necessary to use either alternate thawing method discussed next, the medical department representative (MDR) must be notified.

1. Thaw in the original sealed wrapper or container at room temperature (not to exceed 80°F) for several hours. This procedure is to be used only by small ships when the use of chill box reach-in refrigerators is not available.

2. Thaw in the original unopened container at 50°F or lower in the meat preparation room. This procedure is approved for larger ships that do not have thaw boxes or when the use of chill box reach-in refrigerators is not available.

In each alternate method, the container acts as a refrigerator and allows the meat to thaw from the outside toward the center of the package. The outside pieces remain sufficiently cold to prevent spoilage while the center is thawing.

Proper precautions should be taken to make sure potentially hazardous foods are not allowed to remain at room temperature once thawed.

COOKING FROZEN AND THAWED MEATS

Most cuts of meats should be thawed or tempered before they are cooked. Bulk ground beef, diced meat, and Swiss steak should be completely thawed before they are cooked.

Thawed meats and meats cooked while frozen are prepared exactly as chilled meats. The principle of using lower temperatures cooking is equally applicable to all meats.

Frozen Roasts

If cooked in the frozen state, roasts will require approximately one-third to one-half additional cooking time. Seasoning should be delayed until the outside is somewhat thawed and the surface is sufficiently moist to retain salt, pepper, and flour. The insertion of the meat thermometer can be delayed until the roasts are partially thawed.

Ground Meats, Diced Meats, and Swiss Steak

Ground meats, diced meats, and Swiss steak must be completely thawed before cooking. Beef pattie mix used for meatballs, meat patties, and meat loaf requires mixing with other ingredients and shaping before cooking. Since diced meats used in stews or other recipes often are dredged in flour and seasonings before browning, they must be thawed. Swiss steak also requires thawing before cooking.

Preformed beef patties with soy, 100 percent hamburger patties, grill steak pork chops, and beef patties require tempering before cooking.

To temper meat, remove from freezer and place under refrigeration for a period of time sufficient to help ease separation and handling of the frozen product. Internal temperature of the food should be approximately 26°F to 28°F. The additional time required to cook meats completely done while frozen ties up the cook's time, as well as grill space. Grill steak should never be completely thawed before grilling. Once thawed, the steaks will be dry and tough. Some styles may also fall apart.

Liver should be partially thawed to ensure a moist and palatable product and to provide slices that are uniform and attractive in appearance. If liver appears greenish after grilling, it is not spoiled.

The method used to cook meat is determined by the kind of meat and the tenderness of the cut. Tender cuts require a dry heat method. However, tough cuts require moist heat and long, slow cooking.

MOIST HEAT COOKING METHODS

Moist heat refers to cooking with added liquid or steam. Moist heat methods include braising, simmering, and stewing. These methods are used to cook less tender cuts of meat.

Stewing and Simmering

One method of moist heat cooking is stewing. It is the method used in preparing the least tender cuts of meat. Small pieces of meat cooked in water are said to be stewed; large pieces are said to be simmered. In each case, the meat is covered with water and simmered—kept just below the boiling temperature. It is never boiled. Boiling the meat for the length of time required to tenderize it will dissolve the connective tissue completely and the meat will fall apart and become stringy and dry.

Vegetables may or may not be added to the stew. If they are added, they should be cooked to the “just tender” point and should still retain their color, shape, and flavor after they are cooked. The gravy should be light and smooth and have the same flavor as the meat. The meat is dredged in seasoned flour and browned in a small amount of fat. Stews are made in a steam-jacketed kettle that has a hinged lid. The stew should be held at the simmering temperature until the meat is done, usually about 2 hours. Meat cooked in

liquid is tender and juicy and holds its shape when sliced. Usually the steam-jacketed kettle is used so that the meat can be completely submerged in the liquid at all times.

Braising

Braising is used to prepare tough cuts of meat. Check the Armed Forces Recipe Service (AFRS) for those cuts of meat that should be braised.

To braise, meat is browned in a small amount of added fat, then covered and cooked slowly in the juices from the meat or in a small amount of liquid that is added. The liquid may be water, stock, vegetable juices, thin sauces, or a combination of these liquids. Just enough liquid to start the natural juices in the meat should be used. Only a small amount of liquid should be added at a time as the color and appearance of both the meat and gravy are better if the liquid is kept to a minimum. Pot roast and Swiss steak are cooked using this method of moist heat cooking. Flavor is improved by dredging the pieces of meat in seasoned flour, then browning them in a small amount of fat, or by marinating the meat in a well-seasoned mixture of vinegar, vegetables, and spices (such as sauerbraten). Browning the meat develops flavor and aroma, and a rich brown color is typical of well-prepared braised dishes.

After the meat has been browned, the temperature is reduced, and cooking is continued at a low temperature so that the liquid will not boil. Braising may be done in the oven, on top of the range in a deep pot or in the steam-jacketed kettle. Whichever method is used, the container should be tightly covered. The aim of braising is to produce a piece of meat that is evenly browned on the exterior, tender, juicy, and evenly cooked throughout, with no stringiness. Meat cuts that are braised are always cooked to the well-done stage.

The term *boiled* that is applied to such dishes as New England boiled dinner is actually in conflict with good meat cookery principles. Boiling meats for long periods dissolves the connective tissue, causing the meat to separate. The meat becomes dry, stringy, and tough, making it impossible to carve uniform, thin slices from large cuts.

Frying

Meat may be fried in deep fat, in an oven by panfrying, or in a pan with a small amount of fat by sautéing.

PANFRYING.— Sautéing or shallow panfrying is done on the range or griddle in a pan with just enough fat to keep the meat from sticking. This method of cooking is sometimes more economical and less work when a small amount of food is to be fried

The fat should be heated to the proper temperature before the meat is placed into it; otherwise, the meat will absorb too much of the fat and will be unappetizing. The correct temperatures are indicated on the recipe cards.

Liver, any tender meats (such as grill steaks), and meat mixtures that are breaded or floured may be fried with good results.

DEEP-FAT FRYING.— Deep-fat frying is done by completely immersing the meat in heated deep fat and allowing it to remain in the fat until it is done.

Meat that is to be deep fried should be breaded to prevent an excessive loss of moisture. It is also important to have the fat at the proper temperature. If it is too hot, the exterior of the meat will brown excessively before the interior has had time to cook. If it is too cool, the meat will absorb too much fat and be greasy. A deep-fat thermometer is the only accurate way to determine the temperature of the fat.

For best results, the pieces to be fried should be of uniform size, and the basket should not be overloaded. Just enough pieces should be placed in the basket to completely cover the bottom of the fry basket. This method permits the hot fat to completely surround the meat and ensures thorough cooking. When the basket is overloaded, the fat is cooled excessively, and the hot fat cannot circulate freely.

Fry only one kind of meat or food item at a time. Fry the meat as quickly as possible and only as needed (practice batch cookery). Drain to remove excess fat after cooking, then salt or season. Never salt or season food directly over the fryer.

OVEN FRYING.— Oven frying is similar to baking or roasting except fat is added. Food may be oven fried with or without breading.

DRY HEAT COOKING METHODS

Dry heat refers to cooking meat uncovered without adding moisture. Dry heat methods include roasting, baking, broiling, and grilling. These methods are used for tender cuts of meat that have little connective tissue.

Grilling

Grill steaks, beef patties with soy, ham slices, bacon, liver, and pork sausage are suitable for grilling. In grilling, the meat is placed directly on the ungreased griddle. The heat is transmitted to the meat from the hot metal of the griddle. A moderate temperature is maintained that prevents the meat from overbrowning. Enough fat cooks out to keep the meat from sticking. Excess fat should be removed as it collects to prevent the meat from frying. Tongs or a food turner should be used to turn the meat. Do not use a fork to turn the meat because puncturing the meat with the tines of a fork allows the juices to escape. If the juices escape the meat becomes dry and coarse. Check the AFRS for cuts of beef, lamb, and pork that may be grilled.

Pork requires thorough cooking to bring out its full flavor. Braised pork chops are more desirable from the standpoint of aroma, texture, tenderness, and flavor of the lean meat. If pork chops and pork steaks are grilled, they require additional cooking in the oven to ensure complete doneness. Veal is usually not grilled because it is a lean meat and has an abundance of connective tissue that requires long, slow cooking.

Grilled meat is usually turned only once. The seasoning is applied to the cooked side just after it is turned.

Broiling

Broiling is cooking by dry heat. Conventional and continuous broilers are available in some Navy GMs. For cooking times and temperatures, check the manufacturer's directions for cooking meats. Steaks and hamburgers are generally cooked using broilers. Where broilers are not available, grills are used

Roasting and Baking

The word *roasting* describes the cooking of meat by dry heat in an oven. Any tender cut of beef, pork, or lamb may be roasted. Baking is the preparation method used in roasting ham, meat loaf, fish, and some chicken recipes.

Roasting pans should be of a heavy material with low sides that allow meat to be cooked by hot air freely circulating over and around the meat. Open pan roasting will brown roasts evenly. Do not crowd roasts. Season meat as directed on the AFRS recipes. If racks are available, place roasts on racks to allow juices and fat to drain from roasts as they are cooked.

The following rules pertaining to roasting apply to beef, veal, pork, and lamb. Included with each rule is the "why."

- Use a moderately low oven temperature (325°F) so the roast will be uniformly done throughout, the cooking losses will be moderate, the meat will be more palatable, and the roast will be plump and full. High temperatures cause excessive shrinkage, uneven cooking, and decreased juiciness and tenderness.

- Do not sear meat before roasting. Searing toughens the outer layer of meat, increases cooking losses, causes a loss of fat, and contributes to excessive shrinkage.

- Place roast fat side up on the pan. This eliminates basting; as the meat cooks, it will baste itself with the melting fat.

- Add salt to the roast before or after it is cooked. Salt penetrates less than half an inch below the surface and any salt added before the roast is cooked adds flavor to the drippings.

- Unless specified in the AFRS recipe, never cover a roast. If the roasting pan is covered, the moisture escaping from the meat will surround it and the meat will be cooked by moist heat.

- Do not add water. Roasts cooked without water are juicier and more flavorful. The only reason for adding water would be to keep the drippings from becoming too brown. This will not happen, however, when low oven temperatures are used.

- Do not flour the roast. Drippings from a floured roast may be a more attractive brown, but the same results can be obtained by browning flour in the drippings when you make the gravy.

- Use a meat thermometer to tell when the roast is done. The meat thermometer is the only accurate measure of doneness. The length of cooking time depends on the temperature of the oven, the weight and shape of the roast, and the kind of meat. A dial-type meat thermometer is shown in figure 6-5.

The thermometer should be inserted into the center of the main muscle (the thickest part of the meat) so that the tip of the thermometer does not touch the bone, gristle, or the fat. As the heat from the oven penetrates the meat, the internal temperature at the center of the roast gradually rises and this rise is registered on the thermometer. When the thermometer registers the

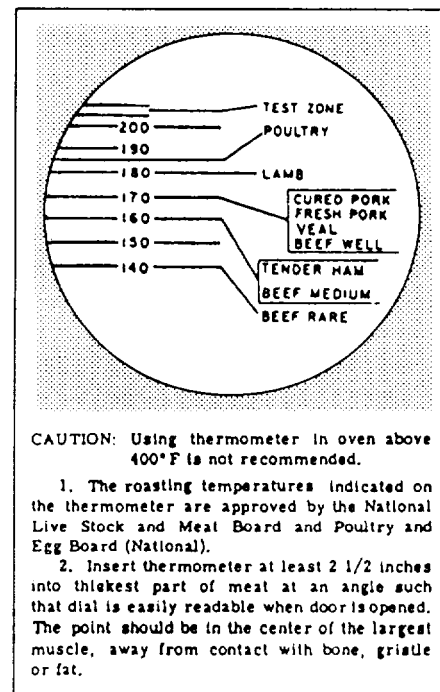


Figure 6-5.—Dial-type roast meat thermometer.

desired temperature for that particular kind of meat, the roast is ready to be removed from the oven.

- Boneless meat will require a somewhat longer cooking period than meat with bones. A smaller roast requires more minutes per pound than a larger one. Follow the AFRS recipe that specifies the type of meat required and the proper cooking temperature.

Cooking time is only a guide to meat doneness. Roasts will continue to cook slightly after being removed from the oven. Cooking time depends principally upon the size and cut of the meat, the degree of doneness desired or required, and the cooking temperature. The temperatures at which meats are cooked also determine cooking times. Maintaining even temperatures aids in predicting cooking periods. For information on convection oven cooking, check the AFRS guidelines, specific recipes, and manufacturer's directions for meat cookery.

POULTRY

Poultry is a menu favorite. Chicken, duck, Rock Cornish hen, and turkey are the main poultry items used in Navy messes.

TYPES

Various styles of chicken, duck and turkey are available for use in Navy messes.

All poultry is inspected to make sure it is free from disease and is slaughtered, dressed, and processed in a clean manner. Canned, boned chicken and turkey are also inspected for wholesomeness.

Poultry may also be graded as to quality. Grading is done according to overall appearance, meatiness, amount of fat, and the presence or absence of defects (torn skin, discoloration, bruises, and so forth). USDA grades A, B, and C are used to indicate poultry that has been officially graded. Grades B and C are not as attractive as grade A but are still wholesome. They may have defects and faulty conformation and be lacking in meat content and fat cover. Examples of grade stamps are shown in figure 6-6.

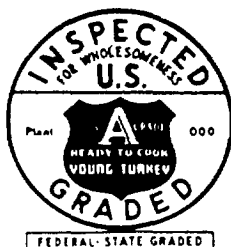
Chicken

Frozen broiler-fryer chickens weighing 3 to 3 1/2 pounds are procured in several styles:

- Whole
- Cutup



U. S. INSPECTION
STAMP



COMBINED U. S.
INSPECTION AND
GRADE STAMP



U. S. GRADE
STAMP

Figure 6-6.—Inspection and grade stamps for poultry.

- Quartered
- Breasts
- Legs
- Thighs

• Frozen Rock Cornish hens are young chickens weighing 20 to 25 ounces that have been produced by crossbreeding the Cornish chicken with other chicken species. They require only thawing and splitting in half and washing under cold water before cooking.

• Canned, boned chicken offers space and weight savings. It needs no refrigeration and is usually stocked when freezer space is limited. Canned chicken may be used in recipes requiring diced chicken, such as chow mein, tetrazinni, baked chicken with noodles, and chicken salad.

• Frozen chicken, breaded, precooked, drumsticks and thighs and/or breast halves, is available for reheating either in the oven or in the deep-fat fryer. The product can be reheated quickly and used as an entrée item or on the speedline.

• Frozen, chicken fillet, breaded, precooked, also can be reheated quickly and used for sandwiches or as an entrée item.

• Frozen, chicken fillet, unbreaded, precooked, also can be reheated quickly and used for sandwiches or as an entrée item.

• Frozen chicken fillet nuggets, breaded, precooked, can be reheated quickly and used as an entrée item or on the speedline.

Turkey

Turkey for Navy messes is procured in the following styles:

• Frozen, whole turkeys vary widely in weight. Hen turkeys have a minimum weight of 12 pounds; tom turkeys weigh 16 to 24 pounds. Self-basting and regular whole turkeys are procured. An 8- to 12-pound whole turkey is available for use aboard submarines.

• Frozen, boneless, raw turkey rolls weigh 9 to 12 pounds and contain the same proportion of light and dark meat as whole turkey. Raw turkey rolls require cooking.

- Frozen chicken and turkey giblets are available for preparation of giblet gravy. Thaw and use according to AFRS directions.

Duck

Frozen, whole roaster ducks weigh 3 to 5 pounds and require only thawing and washing before cooking.

PREPARATION AND COOKING OF POULTRY

Poultry should be handled with strict sanitary measures during both cooking and preparation.

Preparation

Thaw frozen chicken, Rock Cornish hen, turkey, and duck before cooking. All poultry must be thawed at chill temperatures (36°F to 38°F). Never thaw in water.

Thawed poultry should never be refrozen. Refreezing lowers quality and promotes bacterial growth.

Use thawed poultry as soon as possible. Do not hold in refrigeration more than 24 hours. Longer holding lowers quality and risks spoilage.

Whole turkeys, Rock Cornish hens, ducks, and chickens are wrapped in plastic bags. Remove whole poultry from the shipping containers, but leave in the plastic bag. To speed thawing, spread them out so that air can circulate. Cutup or quartered chickens should be thawed in the intermediate carton. If this carton has an overwrapping, remove it.

Turkeys weighing more than 16 pounds require 3 to 4 days to thaw, at 36°F to 38°F. Turkeys weighing under 16 pounds require 2 to 3 days. Whole chickens and ducks require 18 to 24 hours and Rock Cornish hens need 12 to 18 hours.

Clean all poultry after thawing by removing any spongy, red lung tissue inside the back, loose membranes, pinfeathers, and skin defects. Wash poultry inside and out under cold, running water and drain. Refrigerate until needed.

NOTE: All cutting boards used for preparing poultry must be thoroughly sanitized after each use.

Cooking

Procedures for cooking whole turkeys, Rock Cornish hens, chickens, and ducks are described in the AFRS. Poultry maybe cooked using either moist or dry heat. These methods and their variations are explained as follows.

DRY HEAT METHODS.— Care should be taken to prevent the poultry skin from becoming too hard and dry while it is roasting. To prevent dryness, rub the skin of the chicken or turkey with salad oil or shortening. This is not necessary for duck because of its high fat content. If self-basting turkey is supplied, follow the package instructions for cooking. Place the poultry in an open pan, breast side up, on a V-shaped rack if available. A low oven temperature (350°F) should be used for chicken and Rock Cornish hen. Duck and turkey are cooked at 325°F.

If the bird starts browning too soon, aluminum foil may be placed over it to prevent overbrowning. The formation of a hard, dry crust can be prevented by occasionally basting the bird with pan drippings during roasting.

The Navy procures boneless, frozen, cooked, and uncooked turkey rolls. These rolls consist of light and dark meat. The instructions for preparing each type are included with the specific turkey roll and recipes in the AFRS. The boneless turkey roll is equal in quality and flavor to whole turkey, and it is easier and faster to prepare. It also permits accurate portion control, saves storage space, and eliminates waste. However, roast whole turkeys are often prepared for special meals.

As turkey is larger than most other poultry, it is more difficult to cook to the well-done stage without overdoing it. Care should be taken to cook it no longer than necessary; overcooking will result in the loss of juices and stringy, dry meat. The use of a meat thermometer inserted in the thickest part of the thigh muscle will give the internal temperature of the turkey. When the thermometer registers an internal temperature of 180°F to 185°F, the turkey has reached the required stage of doneness. The AFRS contains a timetable for roasting unstuffed turkeys.

MOIST HEAT METHODS.— In moist heat methods, the water should simmer rather than boil to avoid the toughening effect of high temperature on the fibers. Depending upon the cooking method used, temperatures will vary, but slow to moderate temperatures should be used at all times to develop maximum flavor, tenderness, color, and juiciness.

Intense heat will harden and toughen the protein, shrink the muscles, and dry out the juices, thus producing a less palatable product. All poultry should be cooked to the well-done stage. Follow the AFRS directions for preparation.

Panfrying.— To panfry poultry, wipe the pieces dry, season them with salt and pepper, and roll them in flour. If a heavier coating (crust) is desired, dip the pieces in batter or a milk and egg mixture and roll them in soft bread crumbs before they are fried. Put approximately one-half inch of frying fat in a heavy frying pan and preheat to a temperature of 360°F to 365°F. Add the pieces of poultry to the hot pan. Turn the pieces frequently. Use tongs or two spoons to turn the pieces. Do not use a fork because puncturing the meat with the tines of the fork allows the juices to escape. Cook until well-done.

Oven Frying.— Dip the pieces of poultry in flour, milk and egg mixture, then into crumbs. Place poultry in a shallow pan. Pour the fat over the pieces to ensure an even coating. Cook in the oven.

Deep-Fat Frying.— To deep-fat fry poultry, wipe the pieces dry, season them with salt and pepper, and roll them in flour. If a heavier coating (crust) is desired, dip the pieces in batter or a milk and egg mixture and roll them in soft bread crumbs before they are fried. Place enough fat in the pan to completely cover the pieces of poultry. Preheat the fat to 325°F, then carefully lower the pieces into the fat. Do not crowd. The chicken may be cooked until done, or it may be browned in deep fat and placed in the oven to complete the cooking. Always allow the fat to regain the proper temperature before reloading the fryer.

The giblets (gizzard, heart, and liver) need no preparation other than ordinary washing in cold water before cooking. One precaution—the liver should be inspected closely to detect any sign of bile contamination. The bile sack is often broken during its removal from the liver. Bile damage is easily recognizable by a greenish brown or yellow color on the liver. Any liver indicating bile damage is unfit to eat and must be discarded.

After washing the giblets in cold water, you should place them in just enough cold salted water to cover, bring to a boil, then reduce the heat and simmer approximately 1 hour or until they are tender. (Livers cook much faster than gizzards and should be cooked separately.) Save the stock and chop the giblets (do not grind) for use in the gravy or dressing. Refrigerate them until they are ready to use.

MEAT CARVING

For special occasions such as holidays, hand carving hams or roast meats on the serving line is preferred to slicing by machine in the galley.

Rules for Carving Meat

Meats carve more easily if allowed to set (cool off after cooking). The AFRS recipes specify a 20-minute period. The following rules for carving meat should be used:

- Always use clean, sanitized equipment.
- Use the proper knives for the job.
- Keep the knives sharp.
- Use a meat fork.
- Always cut across the grain of the meat and away from the body.
- Arrange meat portions in a serving pan so that you can easily remove slices without breaking them.

You should be able to carve meat portions of equal size. Meat, fish, and poultry recipes indicate the size of the serving portions.

Carving Roast Turkey

Roast whole turkey is usually carved in the galley. Let the turkey stand for about 30 minutes after it is removed from the oven before carving. This will allow the juices to be absorbed, the flesh to become firm, and the turkey can then be sliced with greater ease and efficiency. The carving techniques described as follows are the procedures that should be followed for carving turkey in the galley and will provide generous, accurate portions.

1. Use a sharp, long-bladed knife. Place the legs to your right if you are right-handed, to the left if you are left-handed.

2. Remove the leg by holding the drumstick firmly with the thumb and forefinger. Cut through the skin by drawing the knife back and forth and sever the joint. Press the leg away from the body with the flat side of the knife. Cut the remaining skin on the back. Remove the oyster (choice dark meat in spoon-shaped bone on back) with the leg.

3. Disjoint the drumstick and the thigh by holding the leg at a right angle to the board. Cut

through the meat to the bone; then, hold the thigh with the knife and press down with the other hand until the joint snaps.

4. Slice the leg meat by holding the drumstick at a right angle to the board, cutting down; turn the leg to get uniform slices. To slice the thigh, straddle the bone with a fork and cut into lengthwise strips.

5. Remove the wing by placing the knife at a right angle to the breast, about 1 1/2 inches above the wing, and cut straight through the skin and the wing joint.

6. To remove the breast from the back, insert the knife along the top and cut slowly, guide the knife along the curve of the rib section. Remove the breast in one piece. Place the breast on the slicing board and slice pieces one-fourth inch thick. You may slice the breast meat directly from the bird. Hold the bird with a fork straddling the breastbone or insert the fork in the ribs opposite the side being carved. Start the first slice just above the place where the wing was removed and with the knife parallel to the breast; use a sawing motion and cut the slices about one-fourth inch thick.

7. Arrange the sliced turkey in shallow pans; fill one-half of the pan with white meat and the other half with dark meat. Cover the pan to keep the meat moist and appetizing. A small amount of broth may be added, if desired.

8. Place the sliced turkey in the steam table inserts. Do not permit the steam table temperature to go above 200°F as the meat will become dry and continue cooking.

9. To complete the trimming of the bird, cut all remnants off the carcass. This meat can be used for sandwiches, soups, or creamed dishes.

There are two advantages to this method of carving. It ensures portion control and makes it possible to use all meat on the carcass and avoid waste.

On special occasions roasted whole turkey may be carved on the serving line. This allows everyone to see and share in the festivity that a holiday bird symbolizes.

Be sure to store all unused portions of the bird properly. Place the sliced meat on a tray and cover it loosely with waxed paper before it is placed in the refrigerator. Place trimmings and other edible

parts in the refrigerator if they are not to be used immediately.

Carving Boneless Turkey Roll

Boneless turkey roll may be roasted in the frozen state. If cooked while frozen, allow 1 to 2 hours additional cooking time. If the turkey starts to become too brown, place a piece of foil loosely over the bird for the last hour of cooking. After the turkey is roasted, let it stand for at least 30 minutes, preferably 1 hour, before it is served, so that the juices can be absorbed and the turkey can be sliced more easily and effectively.

If feasible, machine slicing of boneless turkey is preferable to hand slicing. However, regardless of what method is used, the following slicing procedures are recommended:

- Remove the netting and skin.
- Cut in slices about one-fourth inch thick.
- Place the slices in a shallow insert pan and cover with aluminum foil.

Deboning Meat and Poultry

The current availability of frozen boneless meat has practically eliminated the need for foodservice operations to do in-house butchering or deboning of meat. This has increased the capacity of total available storage area.

SEAFOOD

Like meat and poultry, seafood products are excellent protein foods and an excellent source of minerals and vitamins.

There are more than 200 species of fish and shellfish sold in the United States. If you are looking for variety, they give you more choice than any other food group. You can buy fish and shellfish fresh, frozen, and canned.

TYPES

The types of seafood procured by the Navy for use in the GM are listed next (fig. 6-7). These items are prepared and handled under contract specifications to ensure top quality. When requesting these items from a supply activity, you should clearly identify them by national stock number and description.

Type	Form	Description
Cod.....	Frozen.....	Fillets, skinless; breaded fish portions
Flounder.....	Frozen.....	Fillets, skinless; breaded fish portions
Haddock.....	Frozen.....	Fillets, skin on or skinless; breaded fish portions
Halibut.....	Frozen.....	Steaks, skin on
Perch.....	Frozen.....	Fillets, skin on or skinless; breaded fish portions, partially precooked batter-dipped fish portions
Pollack.....	Frozen.....	Fillets, breaded fish portions, partially precooked batter-dipped fish portions
Rockfish.....	Frozen.....	Fillets, skinless
Salmon.....	Frozen.....	Steaks, skin on
Salmon.....	Canned.....	Pieces
Sardines	Canned.....	Headless, packed in olive or vegetable oil
Tuna.....	Canned.....	Chunks or solid pack, packed in water
Whiting.....	Frozen.....	Fillets, skin on or skinless, breaded or partially precooked batter-dipped fish portions
Crab meat.....	Canned.....	Pieces
Crab meat	Frozen.....	Shredded, minced, cooked
Clams.....	Canned.....	Minced, packed in natural juices
Clams.....	Frozen.....	Shucked
Spiny lobster tail...	Frozen.....	Tail
Lobster.....	Fresh.....	Whole
Lobster.....	Frozen.....	Whole
Oysters (Eastern or Gulf).....	Frozen.....	Shucked, IQF
Oysters (Pacific)....	Frozen.....	Breaded, IQF
Scallops.....	Frozen.....	Shucked
Scallops.....	Frozen.....	Breaded, IQF
Shrimp.....	Canned.....	Whole
Shrimp.....	Dehydrated....	Whole, cooked
Shrimp.....	Frozen.....	Breaded, whole, deveined
Shrimp.....	Frozen.....	Whole, peeled, deveined, IQF
Shrimp.....	Frozen.....	Whole, unpeeled

Figure 6-7.—Fish and shellfish authorized for GM.

Seasonally and locally available fresh and frozen fish items are authorized for all GMs through the Department of Defense subsistence offices.

Seafood is highly susceptible to spoilage, and receipts from either Navy or commercial sources should be carefully checked for quality. Refrozen seafood should not be accepted; it will usually have soft, flabby flesh, a sour odor, and may show discoloration. Occasionally, you may have to use fresh fish on your

menu and you should be able to distinguish the good products from bad.

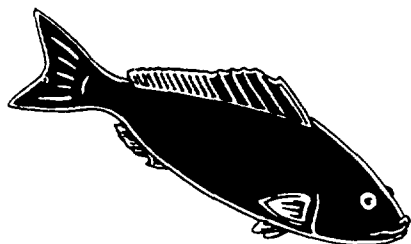
Fin Fish

Fish is an excellent source of protein, minerals, and vitamins. Fin fish (vertebrates) have backbones and fins. Examples include salmon, catfish, cod, flounder, haddock, perch, pollack, rockfish, trout, and whiting.

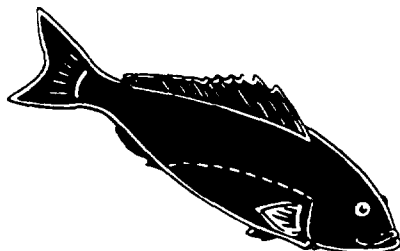
All fresh fish will spoil rapidly if mishandled. Keep under refrigeration and use within 3 days of receipt. Keep frozen fish at 0°F or below. Thaw fish at 36°F—never in water. Handle thawed fish carefully to prevent breakage. Never refreeze fish once thawed.

Most GMs purchase fish in the form that it will be prepared. Fresh fish may be purchased in a variety of cuts or forms as illustrated and described in figure 6-8.

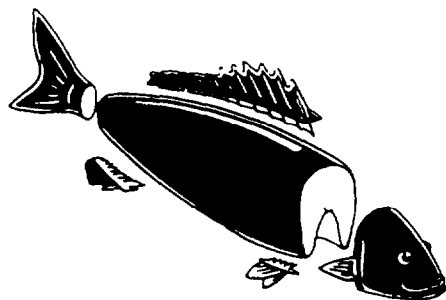
When you are buying fresh fish locally, you should check for quality and freshness. Fresh fish should have the following characteristics:



WHOLE OR ROUND fish are those marketed just as they come from the water. Before cooking, they must be scaled and eviscerated (which means removing the entrails). The head, tail, and fins may be removed if desired, and the fish either split or cut into serving-size portions, except in fish intended for baking. Some small fish, like smelt, are frequently cooked with only the entrails removed.

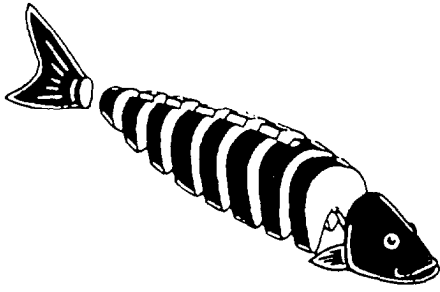


DRAWN fish are marketed with only the entrails removed. In preparation for cooking, they generally are scaled. Head, tail, and fins are removed, if desired, and the fish split or cut into serving-size portions. Small drawn fish, or larger sizes intended for baking, may be cooked in the form purchased after being scaled.

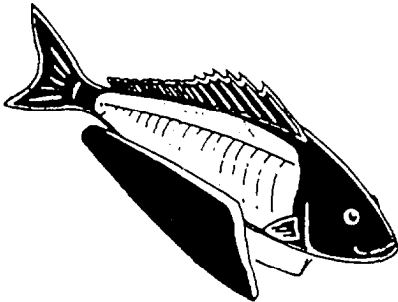


DRESSED fish are scaled and eviscerated, usually with the head, tail, and fins removed. The smaller sizes are ready for cooking as purchased (pan-dressed). The larger sizes of dressed fish may be baked as purchased but frequently are cut into steaks or serving-size portions.

Figure 6-8.—Market forms of fish.



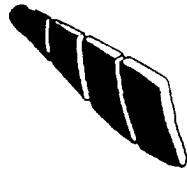
STEAKS are cross-section slices of the larger sizes of dressed fish. They are ready to cook as purchased, except for dividing the very largest into serving-size portions. A cross section of the backbone is usually the only bone in the steak.



The sides of the fish, cut lengthwise away from the backbone, are called FILLETS. They are practically boneless and require no preparation for cooking. Sometimes the skin, with the scales removed, is left on the fillets; others are skinned. A fillet cut from one side of a fish is called a single fillet. This is the type of fillet most generally seen in the market.



BUTTERFLY FILLETS are the two sides of the fish corresponding to two single fillets held together by uncut flesh and the skin.



STICKS are pieces of fish cut lengthwise or crosswise from fillets or steaks into portions of uniform width and length.

Figure 6-8.—Market forms of fish—Continued.

- Eyes—bright, clear, and full
- Gills—reddish pink and free from slime
- Scales—adhering tightly to the skin, bright colored with characteristic sheen
- Flesh—firm and elastic, springing back when pressed, not separating from the bones
- Odor—fresh, free from objectionable odors

Fresh fillets, steaks, and chunks should also have a mild, fresh odor, and the flesh should have a fresh-cut appearance without any traces of browning or drying.

Frozen fish compares favorably in appearance, flavor, and food value with fresh fish and may be used interchangeably. Frozen fish should be delivered still frozen and should remain frozen until just before it is cooked.

Frozen fish fillets and steaks should be thawed gradually under refrigeration and used as soon as possible thereafter. The ideal temperature range for the thawing period is 36°F to 38°F. During the thawing period, the fish should be kept in the box just as it was received from the supplier. The box furnishes insulation that permits all the fish to thaw uniformly. If not properly protected fish is thawed at temperatures that are too high, the surface may begin to spoil before the inside is completely thawed. Frozen, breaded seafood products should not be thawed before they are cooked. In general, a few helpful rules include the following:

- The amount of fish thawed should not exceed the amount to be served.
- Fish should be thawed just before it is used; it should not be refrozen.
- Seafood products should not be thawed under cold running water.

Shellfish

Shellfish have a partial or complete shell covering. There are two classes of shellfish. Crustaceans have semihard to hard shells over the back and claws and soft shells under the body. Shrimp and lobster are examples. Mollusks have two very hard shells of the same size, which are tightly closed when the mollusk is fresh. Sort and discard any open shells before cooking. Clams, oysters, and scallops are examples.

The chief varieties of shellfish available from Navy or commercial sources for use in the GM include clams, crabs, lobsters, crawfish, oysters, scallops, and shrimp.

CLAMS.— Clams are procured as either frozen or canned minced. They are shucked and packed in natural juices. Clams are available as either frozen regular or individually quick frozen (IQF). They should not be thawed until they are to be used. IQF clams are easier to handle since only the amount needed is removed from the container. Once removed, they should not be refrozen, but they should be drained and used in chowder. Canned clams should be drained and used like the frozen ones.

CRAB LEGS.— Crab legs are a similar food item in flavor to lobster. The legs should be split before cooking. Steam or boil and serve with lemon wedges and drawn butter.

CRAB MEAT.— Crab meat is available in tamed and frozen forms. It maybe used in crab cakes, salads, and sandwiches. Both forms are fully cooked and ready to use. Frozen crab meat, once thawed, should be used immediately. Do not refreeze.

LOBSTER.— Lobster is one of the largest species of shellfish. There are two types: northern lobster and spiny lobster. Northern lobster, the true lobster, is distinguished by its large heavy claws.

Whole lobsters are available fresh and frozen. When cooked, the shell turns a bright orange-red color. Fresh and frozen lobsters are very perishable. Keep fresh lobsters alive until ready to use. Do not freeze. Frozen whole lobsters are commercially available wrapped in polyethylene film. Do not thaw before cooking. Keep frozen at 0°F or below. Follow the AFRS for cooking directions. Be sure not to overcook or lobsters will be tough and dry.

Spiny or rock lobster is distinguished by the absence of large claws and by the presence of its long slender antenna and many prominent spines on its body and legs.

CRAWFISH.— Crawfish or lobster tail is sometimes called langosta and is nearly worldwide in its distribution, ranging through the tropical, subtropical, and temperate waters of the Atlantic, Pacific, and Indian Oceans. In the United States it is found in Florida and southern waters.

The meat of the crawfish comes almost entirely from the tail. The frozen tails of several species weighing from 4 ounces to more than 1 pound each are sold on the market.

OYSTERS.— Shucked oysters are those that have been removed from the shell. Shucked oysters should be plump, have a natural creamy color, have a clear liquid (natural juices), and be free from shell particles.

Fresh shucked oysters are generally packed in metal containers or waxed cartons. The cartons should be refrigerated or surrounded by ice.

Pacific and Eastern Gulf oysters are available shucked, frozen, and packed in natural juices. They are also available IQF.

IQF oysters maybe issued without thawing an entire batch. Frozen shucked Pacific oysters are larger than the East Coast varieties. All oysters, once thawed should never be refrozen. They should never be eaten raw. For best results, thaw just before cooking.

If frozen breaded oysters are to be deep fried, then keep them frozen until ready to use.

SCALLOPS.— Scallops are shellfish, similar to oysters and clams. The excellent flavored adductor muscle, sometimes called the eye, is the only edible part of the scallop.

The Navy procures frozen sea scallops. When thawed, they have a sweetish odor. Frozen breaded scallops are available. They may be deep-fat or oven fried.

SHRIMP.— Shrimp are caught in all the coastal waters from Maine to Alaska. Although shrimp vary in color when raw, they differ little in appearance or flavor when cooked. Green shrimp is a commercial term used to denote raw shrimp.

Shrimp may be procured raw, whole; raw, peeled and deveined; raw, breaded, IQF; and in breaded molded shrimp portions.

PREPARATION AND COOKING OF SEAFOOD

The type of seafood to be cooked determines the preparation and cooking method. Fish must be cooked thoroughly but not overcooked. Seafood prepared too far in advance, even though properly cooked, becomes dry, hard, and loses its flavor and succulence. Fish should be baked at a moderate temperature (375°F). It is done when it flakes easily with a fork. Cooking it too long makes it dry and tough.

Preparation

Some fat or oil should be added to practically all varieties of fish, whether light flesh or dark flesh, when they are cooked. The fat helps keep the fish moist while it is cooking and makes it more palatable. If the fish is baked, a solid fat such as butter or shortening may be “dotted” over the fish; melted fat or oil maybe brushed

on the fish; or sliced bacon or thinly sliced salt pork may be laid over the fish. If the fish is to be deep-fat fried, some fat is added to the fish through the frying process. Fat may also be added to the fish by a sauce made with fat or oil.

Simple seasoning is best for most fish. Salt and pepper should be added in moderation; monosodium glutamate also enhances the flavor. Lemon juice and the milder herbs such as parsley are good seasonings. Seasonings may be added to the fish or placed around it in a baking pan, or they maybe incorporated into a sauce or a basting liquid that creates steam and helps to keep fish moist and flavorful. When fish is cooked in a liquid or a sauce, both the fish and the sauce should be lightly seasoned to avoid a salty product.

Cooking

Generally it is best to fry lean fish, such as haddock or flounder, and broil or bake fat fish, such as salmon or mackerel. However, you may broil or bake lean fish if you baste it frequently with melted fat or if you cook it with a sauce to avoid dryness.

BAKING.— You can bake fish of almost any size provided there is enough oven space. Place the fish on a greased pan and brush it thoroughly on both sides with melted butter or margarine. Sprinkle it with the appropriate seasoning and bake at 375°F for 35 minutes or until lightly browned.

PANFRYING.— You can panfry small whole fish or serving-size fillets or steaks. To panfry breaded fish fillets or steaks, follow these procedures:

1. Place the fish fillets or steaks that have been dredged in a mixture of crumbs, flour and pepper, on a sheet pan containing one-eighth inch of shortening. The shortening should be hot, but not smoking.
2. Brown the fish on one side. Turn it carefully, and brown it on the other side. Use moderate heat.
3. Drain the fish and serve hot. Garnish with chopped parsley or lemon wedges.

DEEP-FAT FRYING.— Do not thaw breaded frozen fish portions before cooking them. If you thaw them, the breading may fall off or become tough and dark during the frying process. If this happens, the natural juices of the fish will be lost. Cook frozen portions in fat heated to 350°F for 3 minutes or until lightly browned. Drain well in a basket or on absorbent paper.

You can deep-fat fry small, whole fish or serving-size fillets and steaks. Thaw the fish. Then dip it in an egg-milk mixture, drain it, and roll it in a mixture of bread crumbs and flour. Shake off excess coating. Cook fish in fat heated to 365°F for 4 minutes or until browned. Drain well in a basket or on absorbent paper.

COOKING SHELLFISH.— Shrimp, oysters, and scallops are usually breaded and deep-fat fried. Serve them either separately or in a seafood platter. Drain oysters in a colander after they thaw and remove any pieces of shell. Cook breaded shrimp and scallops in deep fat at 350°F. Fry breaded oysters in deep fat at 375°F.